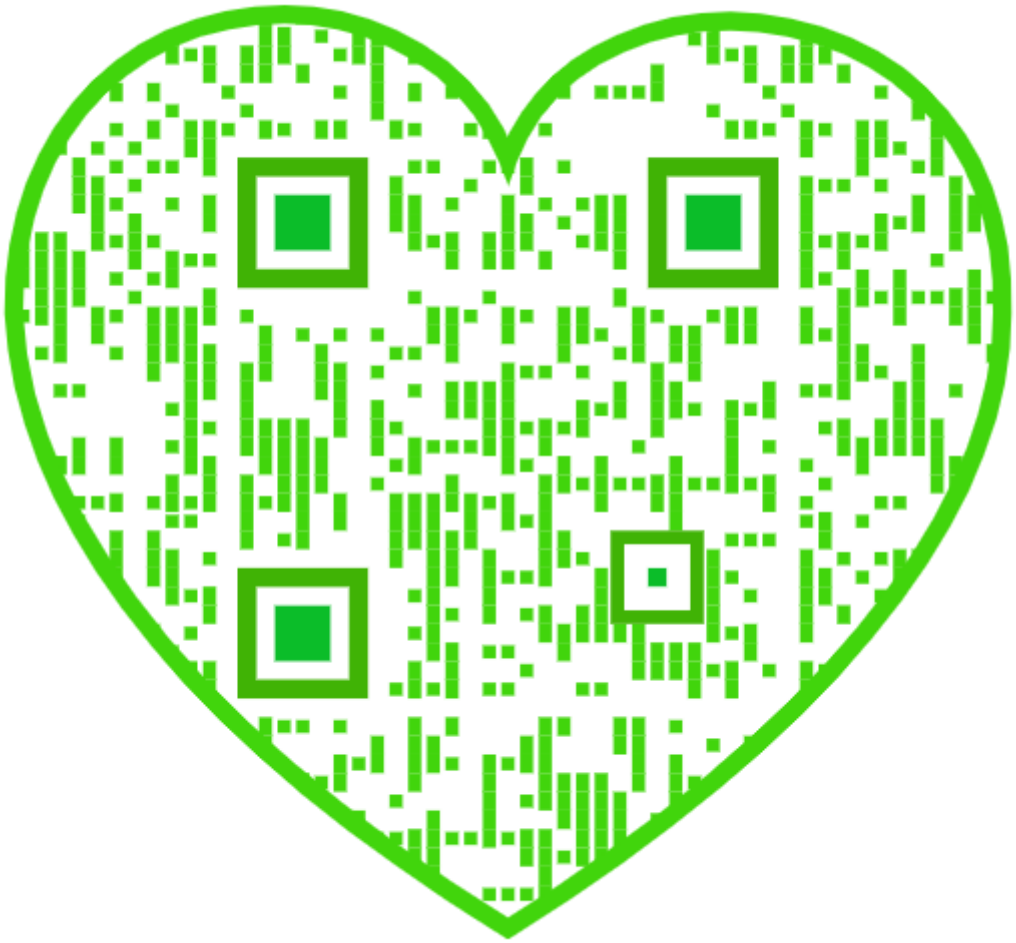
Master in Artificial Intelligence

Algorithm Selection & Development XI



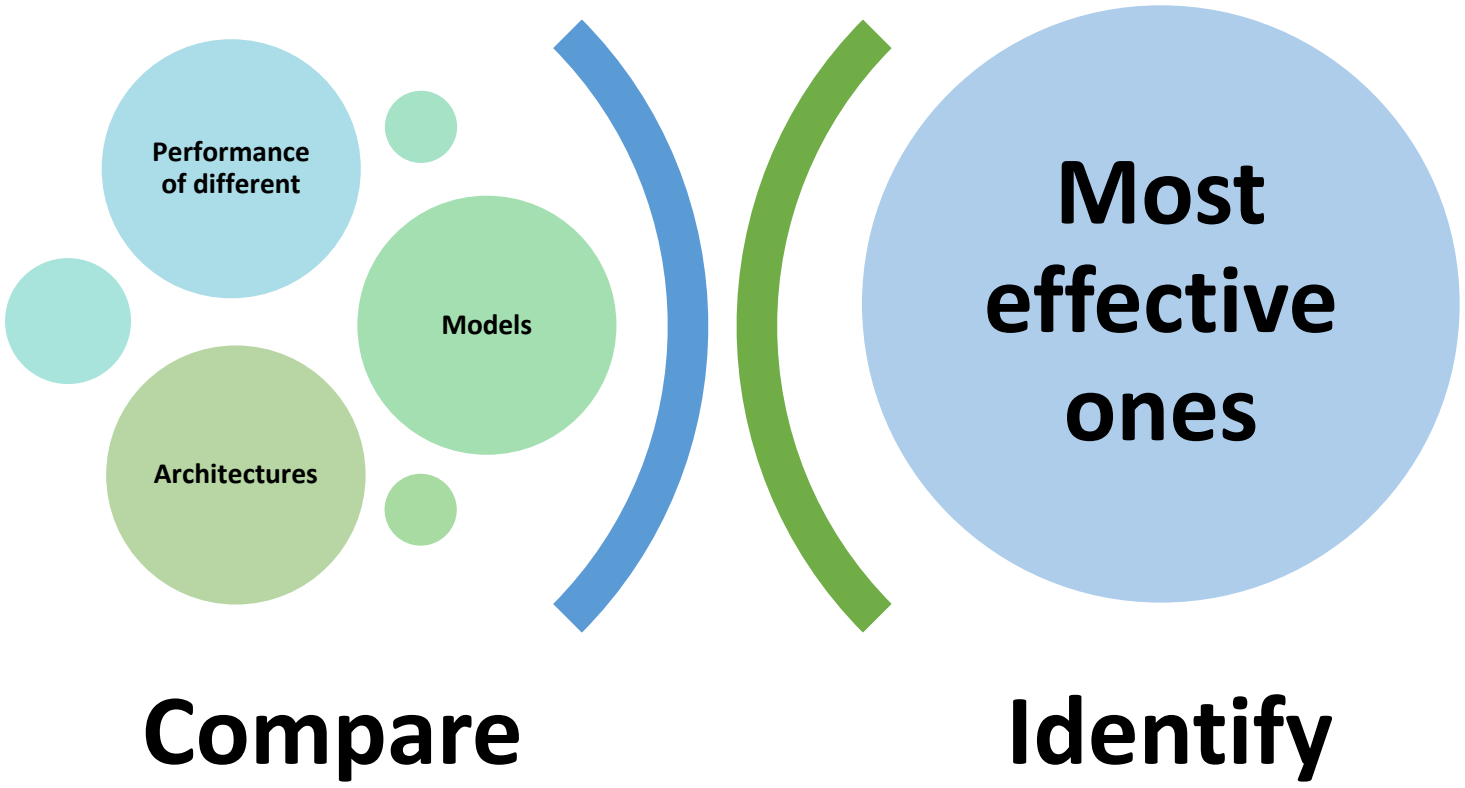
Purpose

The purpose of the section is to help you learn how to research, select, and develop appropriate algorithms to become a Successful Artificial Intelligence (AI) Engineer

At the end of this lecture, you will learn the following

- **How to compare the performance of different models and architectures to identify the most effective ones**

How to compare the performance of different models and architectures to identify the most effective ones



How to compare the performance of different models and architectures to identify the most effective ones

Define Evaluation Metrics

↓

Split Data into Training, Validation, and Test Sets

↓

Train Multiple Models and Architectures

↓

Hyperparameter Tuning

How to compare the performance of different models and architectures to identify the most effective ones

Evaluate Models on Validation Set

↓

Select Best-Performing Model

↓

Evaluate Final Model on Test Set

↓

Perform Sensitivity Analysis

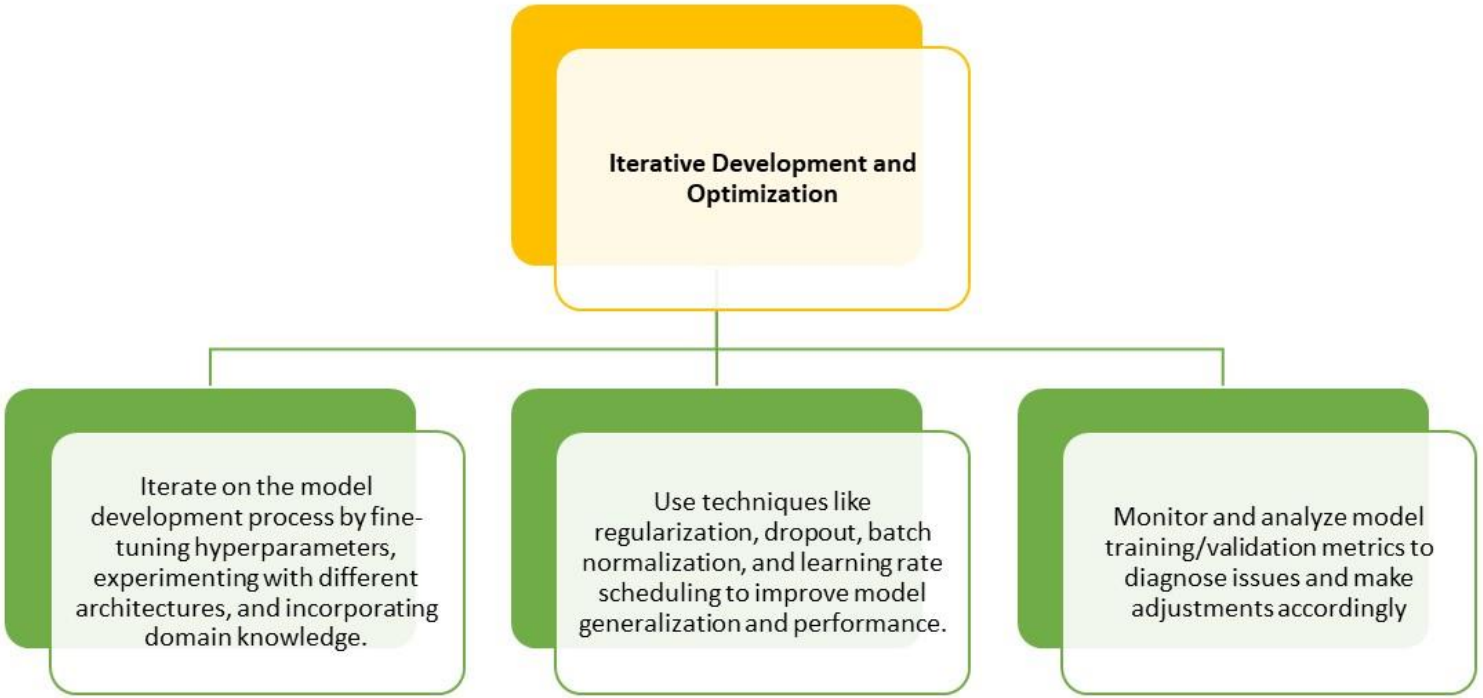
With that we complete the Model Selection and Evaluation

Model Selection and Evaluation

- Select candidate machine learning algorithms or deep learning architectures based on their suitability for the problem and data.
- Train and evaluate multiple models using appropriate evaluation metrics and validation techniques (e.g., cross-validation, hyperparameter tuning).
- Compare the performance of different models and architectures to identify the most effective ones.

What is next?

And get into Iterative Development and Optimization



Master in Artificial Intelligence

Algorithm Selection & Development XI